

An Essay
on
The offices of the Peritonium.

Respectfully Submitted
To the Faculty of the
Homoeopathic Medical College
of Pennsylvania,
on the

Twentieth day of January
One thousand Eight Hundred & fifty three.

By

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of Maine.

Let us look a little more in
de Unpromising as this subject at
first view appears, it really possesses
many curious and interesting points.
Like some other parts of the animal
economy if regarded only superfi-
cially, the Peritoneum presents a
merely mechanical aspect, as de-
void of physiological interest as
of physical beauty. More closely
examined it is found to be
not merely a gross covering of
the abdominal viscera, but a
means most wonderfully and
beautifully adapted to protect
and preserve in a healthy con-
dition the organs and systems
placed within its charge.

Let us look a little more in detail at some of its principal uses.

One of its most apparent offices is to sustain in place and shield from external injury the viscera with which it is in immediate association. The first it accomplishes by means of its numerous folds and reflections, forming bands and attachments of curious adaptation. The second by the simple interposition of itself between these viscera and the external world. To these ends it is extensible and elastic, - yielding and reacting like common tendinous tissue. In

the accomplishment of this double purpose it associates these viscera into a brotherhood, - serves as a medium for transmitting some of their blood vessels, and distributes among them of its own warmth and vitality.

Another and most important office of the Peritoneum is to furnish to the visceral surfaces, a profuse, unguent secretion, perfectly adapted to soften and lubricate them and to enable them to glide upon themselves and each other, in their almost ceaseless movements, with facility and without attention. This it accomplishes principally through the greater Omentum,

By means of this fluid the visceral surfaces are also protected against the corroding effects of the acid exhalations which exist in the interior of the abdomen — and by it, through the connection formed by the cellular tissue of the omentum with that of the duodenum and the colon, the residuum of the chyme is macerated, softened and ^{helped} ~~sent~~ on its way.

But it has still another and not less vital office. This same omental portion serves as a storehouse for the superabundant materials of the blood — secreting them in its cells as the honey

in the comb, and for a similar purpose; namely, against the time of need.

That such ~~a~~ receptacles ~~is~~ are needed is sufficiently apparent, and that this is one of the offices of the Omentum is to be seen from the fact that certain arteries — the coeliacs — in their course elsewhere follow the free borders of this portion of the membrane, throw off branches which enter its expanded portion and ramify through its substance, where their peculiar connection with the intimate structure of the adipose deposit in that region, fully warrants our conclusion.

According to Malpighi, the pelicle covering a globule of the omental fat, as shewn under the microscope, is itself a minute omentum - and this first globule is made up of numerous smaller ones, each possessing its little membrane, channelled by minute veins and arteries. "These blood vessels" says this author, "expand like trees into branches, and to the extremities of these branches are appended the membranous sacculi, full of the fatty globules. Whether all the adipose globules be again invested with a pelicle, or not, the eye is unable to decide, This much, however, can be seen - the globules

are connected to the sides of the branches as the stones of the grapes are appended to the stalks."

That the omentum is thus a depository for the superabundant materials of the blood is apparent. That, as such, it is drawn upon whenever the blood has been impoverished in quality by disease, or diminished in quantity by mechanical injury, is equally apparent from the fact that causes such as these produce the certain and sometimes the sudden diminution of this adipose deposit.

From the intimate arrangement of these fatty particles it must

also result that their most interior portion is secreted from the purest materials of the blood, for the grosser blood globules could not possibly pass these exceedingly minute arteries, or be received back by the equally minute veins into the general circulation.

Thus this Peritoneum, so uninteresting at the first glance, and apparently serving a merely mechanical end, is in reality a tissue of the highest importance — a membrane, the structure of which is held in place by the most beautiful and orderly arrangement of its minute parts —

a preserver of civil harmony
and comfort — a sort of appen-
dix to the sanguinary circulation
— the trustee of a reserved fund
for future emergencies.